

Operating manual

Version 1.0

Drill press

- | | | |
|-----------------------|--------------|---------|
| ☐ | DQ 13 | 3182000 |
| ☐ | DQ 16 | 3182010 |
| ☐ | DQ 20 | 3182020 |



DQ13



DQ16



DQ20

Safety

Technical data

Delivery, interdepartmental
transport and unpacking

Operation

Maintenance

Malfunctions

Appendix

Ersatzteile - Spare parts

Keep for future reference !

1 Safety

Glossary of symbols

▶	provides further instructions
→	calls on you to act
□	listings

This part of the operating instructions

- explains the meaning and use of the warning notes included in these operating instructions,
- defines the intended use of the drill press,
- points out the dangers that might arise for you or others if these instructions are not observed,
- informs you about how to avoid dangers.

In addition to these operating instructions, please observe

- the applicable laws and regulations,
- the statutory provisions for accident prevention,
- the prohibition, warning and mandatory signs as well as the warning notes on the drill press.

Always keep this documentation close to the drill press.

INFORMATION

If you are unable to rectify an issue using these operating instructions, please contact us for advice:

Stürmer Maschinen GmbH
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email: info@stuermer-maschinen.de



1.1 Safety instructions (warning notes)

1.1.1 Classification of hazards

We classify the safety warnings into different categories. The table below gives an overview of the classification of symbols (ideogram) and the warning signs for each specific danger and its (possible) consequences.

Symbol	Alarm expression	Definition / consequence
	DANGER!	Impending danger that will cause serious injury or death to people.
	WARNING!	A danger that can cause serious injury or death.
	CAUTION!	A danger or unsafe procedure that can cause personal injury or damage to property.
	ATTENTION!	Situation that could cause damage to the drill press and product, as well as other types of damage. No risk of injury to persons.

DQ13_DQ16_DQ20_GB.fm

Symbol	Alarm expression	Definition / consequence
	Information	Practical tips and other important or useful information and notes. No dangerous or harmful consequences for people or objects.

In case of specific dangers, we replace the pictogram with





or



general dangerwith a warning ofinjury to hands,hazardouselectrical voltage,rotating parts.

1.1.2 Other pictograms



Warning: danger of slipping!Warning: risk of stumbling!Warning: hot surface!Warning: biological hazard!



Warning: automatic start-up!Warning: tilting danger!Warning: suspended loads!Caution, danger of explosive substances!



Use ear protection!Read the operating instructions before commissioning!Pull out the mains plug!



Wear protective glasses!Wear protective gloves!Wear safety shoes!Wear a protective suit!

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1.2 Intended use

WARNING!

If the drill press is not used as intended or if the safety directives or the operating instructions are ignored the liability of the manufacturer for any damages to persons or objects resulting hereof is excluded and the claim under guarantee is becoming null and void!



The drill press is designed and manufactured to be used in a non-explosive environment. The drill press is designed and manufactured for holes in cold metals or other non flammable materials or that not constitute a health hazard using a rotating filing-stripping tool that has a number of grooves for collecting the filings. The drill press is equipped with a drill chuck protection. The drill may only be operated with this chuck guard.

If the drill press is used in any way other than described above, modified without authorization of Stürmer Maschinen GmbH, then the geared drill is being used improperly.

We will not be held liable for any damages resulting from any operation which is not in accordance with the intended use.

We explicitly point out that any construction, technical or process engineering changes that have not been approved by Stürmer Maschinen GmbH will render the warranty null and void

It is also part of intended use that the maximum values for the drill press are complied with and the operating manual is observed.

ATTENTION!

If the drill press is not used as intended or if the safety directives or the operating instructions are ignored the liability of the manufacturer for any damages to persons or objects resulting hereof is excluded and the claim under guarantee is becoming null and void!



1.3 Reasonably foreseeable misuses

Any use other than that specified under "Intended use" or any use beyond that described will be deemed non-intended use and is not permissible. Any other use has to be discussed with the manufacturer.

It is only permissible to process metal, cold and non-inflammable materials with the drill press.

In order to avoid misuse, it is necessary to read and understand the operating instructions before first commissioning.

Operators must be qualified.

1.3.1 Avoiding misuse

- Use of suitable cutting tools.
- Adapting the speed setting and feed to the material and workpiece.
- Clamp workpieces firmly and free of vibration.

ATTENTION!

The workpiece is always to be fixed by a machine vice, jaw chuck or by another appropriate clamping tool such as for the clamping claws.



WARNING!

Risk of injury caused by flying workpieces.

The table height adjustment must not be used as a drill feed. The clamping of the table is released, the possible load capacity of the table height adjustment is not intended for this.

- Clamp the workpiece in the machine vice. Make sure that the workpiece is firmly clamped in the machine vice and that the machine vice is firmly clamped onto the drill table.
- Use cooling and lubricating agents to increase the durability of the tool and to improve the surface quality.



- Clamp the cutting tools and workpieces on clean clamping surfaces.
- Sufficiently lubricate the machine.

Recommendations:

- Insert the drill in a way that it is positioned exactly between the three clamping jaws of the drill chuck.

When drilling, make sure that

- the suitable speed is set depending on the diameter of the drill,
- the pressure must only be such that the drill can cut without load,
- if there is too much pressure, the drill will wear quickly and may even break or jam in the borehole. If the drill gets jammed immediately stop the main motor by pressing the emergency stop button,
- For hard materials, e.g. steel, it is necessary to use commercial cooling/lubricating agents. Basically, always pull out the drill with rotating spindle from the workpiece.
- The processing of plastics on the drill press leads to static charging. The static charging of machine parts due to the processing of plastics cannot be safely dissipated by the drill press.

1.4 Possible dangers posed by the drill press

The drill press is state-of-the-art. Nevertheless, there is a residual risk, as the drill press operates with

- high speeds,
- rotating parts,
- electrical voltage and currents.
- We have used design and safety engineering to minimize the health risk to personnel resulting from these hazards.

If the drill press is used and maintained by personnel who are not duly qualified, there may be a risk resulting from incorrect or unsuitable maintenance of the drill press.

INFORMATION

Everyone involved in the assembly, commissioning, operation and maintenance must

- be duly qualified
- and strictly follow these operating instructions.

In the event of improper use

- there may be a risk to personnel,
- there may be a risk to the machine and other material values,
- the correct function of the drill press may be affected.

Always disconnect the drill press when cleaning or maintenance work is being carried out.

WARNING!

The drill press may only be used with fully functional safety devices.

Disconnect the drill press immediately, whenever you detect a failure in the safety devices or when they are not fitted!

This is your responsibility being the operator!



1.5 Qualification

1.5.1 Target group private users

The machine can be used in the private domain. The acumen of people in the private sector with training in metal working was taken into consideration for creating this operation manual. Vocational training or further instruction in a metal working profession is a prerequisite for safe operation of the machine. It is essential that the private user is aware of the dangers involved in

operating this machine. We recommend attending a training course in the use of drills. Your specialist dealer can offer you an appropriate training course. These courses are also offered at adult education centres in Germany.

1.5.2 Obligations of the User

The user must

- have read and understood the operating manual,
- be familiar with all safety devices and regulations,
- be able to operate the drill press.

1.5.3 Additional requirements regarding the qualification

The following additional requirements apply for work on electrical components or equipment:

- They must only be performed by a qualified electrician or person working under the instructions and supervision of a qualified electrician.

Before starting work on electrical parts or operating agents, the following actions must be taken in the order given:

- disconnect all poles,
- secure against restarting,
- check that there is no voltage.

1.6 User positions

The operator position is in front of the drill press.

INFORMATION

The power plug of the drill press must be readily accessible.



1.7 Safety measures during operation

CAUTION!

Danger due to inhaling dust and mist that is hazardous to health. Dependent on the material which need to be processed and the used auxiliaries dusts and mist may be caused which might impair your health. Ensure that the harmful dust and mist generated are safely sucked off at the point of origin and routed away from the working area or filtered. To do so, use a suitable extraction unit.



CAUTION!

Risk of fire and explosion by using flammable materials or cooling lubricants.

Before processing inflammable materials (e.g. aluminium, magnesium) or using inflammable auxiliary materials (e.g. spirit) it is necessary to take additional preventive measures in order to safely avoid health risks.



1.8 Safety devices

The drill press must only be operated with fully functional safety devices.

Stop the drill press immediately if there is a failure on the safety device or becomes ineffective.

It is your responsibility!

If a safety device has been activated or has failed, the drill press must only be used if you

- the cause of the fault has been eliminated,
- have verified that there is no danger to personnel or objects.

WARNING!

If you bypass, remove or override a safety device in any other way, you are endangering yourself and other persons working with the drill press. The possible consequences are:

- injuries due to components or workpieces flying off at high speed,
- contact with rotating parts and
- fatal electrocution.



The drill press includes the following safety devices:

- an emergency stop push button,
- a drilling table with grooves for fixing the workpiece or a vice,
- a fixed protective cover for the pulleys with position switch,
- a foldable drill chuck guard for DQ13 and DQ16
- a chuck guard with microswitch on DQ20

WARNING!

Although the isolating safety devices provided and delivered with the machine are designed to reduce the risks of workpieces being ejected or parts of tools or workpieces breaking off, they cannot eliminate these risks completely. Always work carefully and observe the limits of the machining process.



1.9 Personal protective equipment

For certain work, personal protective equipment is required.

Protect your face and your eyes: Wear a safety helmet with facial protection when performing work where your face and eyes are exposed to hazards.



Wear protective gloves when handling pieces with sharp edges.



Wear safety shoes when you assemble, disassemble or transport heavy components.



Use ear protection if the noise level (emission) in the workplace exceeds 80 dB (A).

Before starting work make sure that the required personal protective equipment is available at the work place.



CAUTION!

Soiled personal protection equipment that may be contaminated may cause illness. It must be cleaned after each use and at least once a week.



1.10 Safety check

Check the drill press before each start-up or at least once per shift. Inform the person responsible immediately of any damage, defects or changes in the operating function.

Check all safety devices

- ☐ at the beginning of each shift (with the machine stopped),
- ☐ once a week (with the machine in operation) and
- ☐ after all maintenance and repair work.

Check that prohibition, warning and information signs and the labels on the drill press.

- ☐ are legible (clean them, if necessary)
- ☐ are complete (replace if necessary).

INFORMATION

Organise the checks according to the following table;



General check		
Equipment	check	OK
Guards	Mounted, firmly bolted and not damaged	
Signs, Markers	Installed and legible	
Date:	Checked by (signature):	

Functional check		
Equipment	check	OK
only on DQ20 - drill chuck guard	After opening the drill chuck guard, the DQ20 drill must switch off. The DQ20 drill must not start when the chuck guard is open.	
Emergency stop button	After actuating the emergency stop switch, the drill press must switch off.	
Position switch of protective cover V-belt	The drill press must not be switched on, if the protective cover of the V-belts is opened.	
Date:	Checked by (signature):	

1.11 Emergency stop switch

CAUTION!

The drilling spindle keeps turning for a short time even after actuating the emergency stop switch depending on the preset speed.



1.11.1 Drilling table

Seats for T-slots are attached to the clamping table.

WARNING!

Risk of injury due to workpieces flying off at high speed. Securely fix the workpiece on the drilling table.



1.12 Separating protective devices

1.12.1 Drill chuck guard

Adjust the DQ20 guard to the correct height before you start working. To do this, loosen the clamping screw, set the required height and tighten the clamping screws again.

1.12.2 Protective cover of the V-belts

A protective cover for the belt pulleys is mounted on the drilling head. There is a switch integrated in the protective cover which monitors that the cover is closed.

INFORMATION

The machine cannot be started, if the protective cover is not closed.



1.12.3 Prohibition, warning and mandatory signs

INFORMATION

All warning signs must be legible. They must be checked regularly.



1.13 Personal protective equipment

For some works you need personnel protective equipment as protective equipment. These are

- ☐ safety helmet,
- ☐ protective glasses or face guard,
- ☐ protective gloves,
- ☐ safety shoes with steel toe caps,
- ☐ ear protection.

Before starting work make sure that the required personnel protective equipment is available at the work place.

CAUTION!

Soiled personal protection equipment that may be contaminated may cause illness. It must be cleaned after each use and at least once a week.



Personal protective equipment for special works

Protect your face and your eyes: Wear safety glasses for all work where your eyes are at risk.

Wear protective gloves when handling pieces with sharp edges.

Wear safety shoes when you assemble, disassemble or transport heavy components.

1.14 Safety during operation

We specifically point out the dangers in the description of work with and on the drill press.

WARNING!

Before activating the drill press, double-check that make sure that there are no dangers generated for persons, not cause damage to equipment.

Avoid any unsafe work methods.



- ☐ Make sure that your work does not endanger anyone.
- ☐ The instructions described in these operating instructions must be strictly observed during assembly, operation, maintenance and repair.
- ☐ Do not work on the drill press if your concentration is reduced, for example, because you are taking medication.
- ☐ Inform the supervisor about all hazards or faults.
- ☐ Stay on the drill press until the machine completely stopped moving.

DQ13_DQ16_DQ20_GB.fm

- Use the specified personal protective equipment. Ensure you wear close-fitting clothing and, if necessary, a hairnet.
- Do not use protective gloves when drilling.

1.15 Safety during maintenance

Inform the operators in good time of any maintenance and repair works.

Report all safety relevant changes and performance details of the drill press or their operational behaviour. Any changes must be documented, the operating instructions updated and machine operators instructed accordingly.

1.15.1 Disconnecting and securing the drill press

Disconnect the mains plug before starting maintenance and repairs.

All machine parts as well as all dangerous voltages are switched off. Excepted are only the positions which are marked with the adjoining pictogram.

Attach a warning sign to the machine.

1.15.2 Mechanical maintenance

Remove or install protection safety devices before starting or after completing any maintenance work; this include:

- covers,
- safety instructions and warning signs,
- grounding cables.

If you remove protection or safety devices, refit them immediately after completing the work. Check that they are working properly!

1.16 Electronics

Craftsman or industrial use

Have the machine and/or the electric equipment checked regularly. Immediately eliminate all defects such as loose connections, defective wires, etc.

A second person must be present during work on live components to disconnect the power in the event of an emergency. If there is a fault in the power supply, switch off the milling machine immediately!

The operator of the machine must ensure that the electrical systems and operating equipment are inspected with regards to their proper condition, namely,

- by a qualified electrician or under the supervision and direction of a qualified electrician, prior to initial commissioning and after modifications or repairs, prior to recommissioning
- and at set intervals.

The deadlines must be set so that arising, foreseeable defects can be detected in a timely manner.

The relevant electro-technical rules must be followed during the inspection.

2 Technical data

The following information represents the dimensions and indications of weight and the manufacturer's approved machine data.

	DQ 13	DQ 16	DQ 20
Electrical connection	230V~50 Hz (~60Hz)	230V~50 Hz (~60Hz)	230V~50 Hz (~60Hz) 400V~50 Hz (~60Hz)
Spindle drive motor power	350 W	450 W	550 W
Drilling capacity in steel (S235JR - ST37)	Ø 13 mm	Ø 15.9 mm	Ø 20 mm
Continuous drilling capacity in steel (S235JR - ST37)	Ø 12 mm	Ø 15 mm	Ø 18 mm
Distance spindle - column	105 mm	128 mm	180 mm
Spindle sleeve travel [mm]	52	65	85
Spindle holding fixture	B16	MT2	MT2
Spindle sleeve diameter	Ø 40 mm	Ø 42 mm	Ø 47 mm
Column diameter	Ø 46 mm	Ø 60 mm	Ø 72 mm
Table size	160 mm x 160 mm	200 mm x 200 mm	290 mm x 290 mm
Drilling table T-slot size	14 mm diagonal	16 mm diagonal	14 mm diagonal
Maximum distance spindle - table	220 mm	410 mm	410 mm
Maximum distance spindle - stand	300 mm	530 mm	600 mm
Working surface machine stand	190 x 290 mm	355 x 235 mm	460 x 270 mm
Packing size [L x W x H]	460 x 340 x 250 mm	665 x 430 x 255 mm	810 x 490 x 270 mm
Net machine weight [kg]	15	28	50
Spindle speeds [rpm] at ~50Hz connection	620 - 2620	250 - 2400	180 - 2770
V-belt speed steps	5	12	16
Environmental conditions temperature	5 ~ 35 °C		
Environmental conditions Relative humidity	25 - 80 %		
Operating equipment, toothed rack and oiler Operating equipment, toothing on the spindle	Acid-free lubricating oil Assembly grease for clearance fits, e.g. Staburag NBU 30 PTM		

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2.1 Emissions

CAUTION!

Depending on the overall noise exposure and the basic threshold values, machine operators must wear appropriate hearing protection.

We generally recommend the use of noise and ear protection.

The A-weighted sound pressure level L_{pA} is 77 to 80 dB.

The A-weighted sound power level L_{WA} is 100 to 107 dB.



INFORMATION

This numerical value was measured on a new machine under the operating conditions specified by the manufacturer. The noise behaviour of the machine might change depending on the age and wear of the machine.

Furthermore, the noise emission also depends on production engineering factors, e.g. speed, material and clamping conditions.



INFORMATION

The following factors influence the actual degree of the noise exposure of the operator:

- Characteristics of the working area, e.g. size of damping behaviour,
- other noise sources, e.g. the number of machines,
- other processes taking place in proximity and the period of time, during which the operator is exposed to the noise.

Furthermore, it is possible that the admissible exposure level might be different from country to country due to national regulations.

This information about the noise emission should, however, allow the operator of the machine to more easily evaluate the hazards and risks.



3 Delivery, interdepartmental transport and unpacking

CAUTION!

Injuries caused by parts falling over or off a forklift, pallet truck or transport vehicle. Only use means of transport that can carry the total weight and are suitable for it.



3.1 Notes on transport, installation and unpacking

Improper transport of individual devices and minor machines, unsecured devices and minor machines stacked on top of each other or next to each other in packed or already unpacked condition is accident-prone and can cause damage or malfunctions for which we do not grant any liability or guarantee.

Transport the scope of delivery secured against shifting or tilting with a sufficiently dimensioned industrial truck to the installation site.

3.1.1 General risks during internal transport

CAUTION: DANGER OF TIPPING!

The device may be lifted unsecured by a maximum of 2cm.

Employees must be outside the danger zone, the reach of loads. Warn employees and, if necessary, advise employees of the hazard.

Act responsibly during transport and always consider the consequences. Refrain from daring and risky actions.



Gradients and descents (e.g. driveways, ramps and the like) are particularly dangerous. If such passages are unavoidable, special caution is required.

Before starting the transport check the transport route for possible danger points, unevenness and disturbances as well as for sufficient strength and load capacity.

Danger points, unevenness and disturbance points must be inspected before transport. The removal of danger spots, disturbances and unevenness at the time of transport by other employees leads to considerable dangers.

Careful planning of internal transport is therefore essential.

3.2 Delivery

Check the status of the machine immediately upon receipt and claim possible damages at the last carrier also if the packing is not being damaged. In order to ensure claims towards the freight carrier we recommend you to leave the machines, devices and packing material for the time being in the status at which you have determined the damage or to take photos of this status. Please inform us about any other claims within six days after receipt of delivery.

3.3 Unpacking

Place the machine near its final location before proceeding to unpack. If the packaging shows signs of having possibly been damaged during transport, take the appropriate precautions to prevent the machine being damaged when unpacking. If damage is discovered, the carrier and/or shipper must be notified immediately so the necessary steps can be taken to register a complaint.

Examine the complete machine carefully and check whether all materials, such as shipping documents, instructions and accessories have been delivered with the machine.

3.4 Standard scope of delivery

3.4.1 Drill press DQ 13

1	Base	290mm x 190mm	1
2	Table & Support	160mm x160mm	1
3	Column	Ø 46mm x395mm	1
4	Head section	DQ13	1
5	Handle		3
6	Chuck	J2513-13mm	1
7	Chuck key		1
8	Chuck guard	Ø 40mm	1
9	Hex. socket head cap screws	M8 x20	3
10	Washer	Ø 8	3
10	Flat washer	Ø 8	3
11	Allen key	S3/S4/S6	each 1
12	Manual	A5	1

3.4.2 Drill press DQ 16

1	Base	355 mm x 235 mm	1
2	Table & Support	200 mm x 200 mm	1
3	Morse taper	MT2-B16	1
4	Column	Ø 60mm x 640mm	1
5	Toothed rack	460mm	1
6	Head section	DQ16	1
7	Aluminium handle		1
8	Keyless drill chuck	1-16mm	1
9	Chuck guard	Ø 40mm	1
10	Toothed rack collar	Ø 60mm	1
11	Crank		1
12	Hexagon socket screw	M8 x 25	3
13	Hexagon socket screw	M8 x 20	3
14	Washer	8	3
15	Flat washer	Ø 8	3
16	Allen key	S3/S4/S6	each 1
17	Expulsion wedge		1
18	Manual	A5	1

3.4.3 Drill press DQ 20

1	Base	450 mm x 270mm	1
2	Table	290 mm x 290 mm	1
3	Morse taper	MT2-B16	1
4	Column	Ø72 mm x 750 mm	1
5	Toothed rack	520 mm	1
6	Head section	DQ20	1
7	Table arm & drill table support		1
8	Aluminium handle		1
9	Keyless drill chuck	1-16 mm	1
10	Chuck guard		1
11	Table strut		1
12	Toothed rack collar	Ø 72mm	1
13	Crank		1
14	Hexagon socket screw	M10 x 25	4
15	KB screw	M8 x 20	3
16	Washer	Ø10	4
17	Flat washer	Ø8	3
18	Allen key	S3/S4/S6/S8	each 1
19	Expulsion wedge		1
20	Manual	A5	1

3.5 Installation requirements

Organise the working area around the machine according to the local safety regulations. The work area for operation, maintenance and repair must not be restrictive.

The illumination of the workplace must be designed in such a manner that an illumination of 500 Lux is attained at the tool tip.

If this is not guaranteed with the normal installation site lighting, workplace lights (available as an option) must be used.

- Follow the prescribed safety areas and escape routes according to VDE 0100 part 729 as well as the environmental conditions for the operation of the machine.
- The mains plug or the main switch of the machine installed by the operator must be freely accessible.
- The machine must only be installed and operated in a dry and well-ventilated place.
- Avoid places near machines generating chips or dust.
- The installation site must be free from vibrations also at a distance of presses, planing machines, etc.
- Provide sufficient space for the personnel preparing and operating the machine and transporting the material.
- Also make sure the machine is accessible for setting and maintenance works.

3.5.1 Assembly

WARNING!

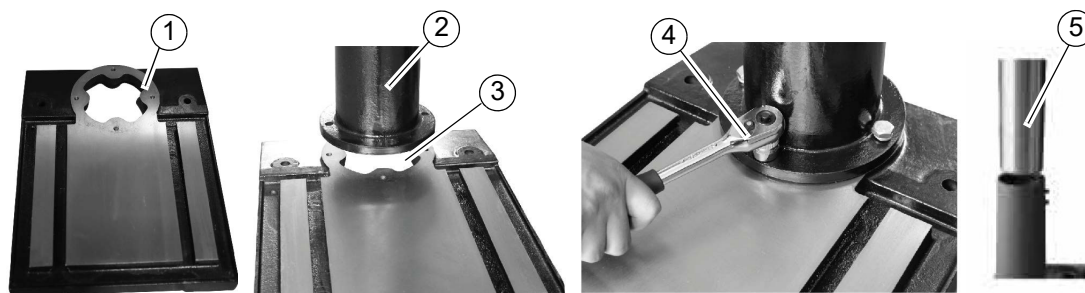
During assembly ensure the drill press is disconnected from the power supply.

Carefully remove contents from the packing box. Select a firm, level surface on which to assemble the drill press.



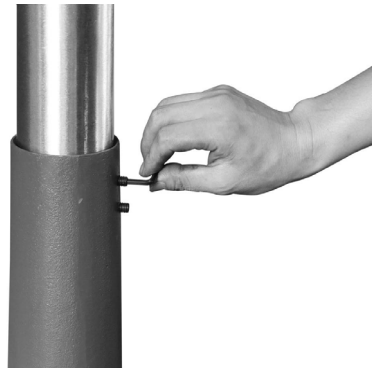
Base & Column

- Select the base (1) and align the column support (2) over the large hole (3).
- Align the holes in the column support with those in the base and secure with the bolts and washers. Tighten all bolts securely using a spanner (4).
- We recommend mounting the base to stable surface for proper support.
- Slide the column into the column support (5).



Img.3-1:

→ Secure in place with 2 grub screws using the hex key.



Img.3-2:

Rack & Table

→ Install the rack into the table support.



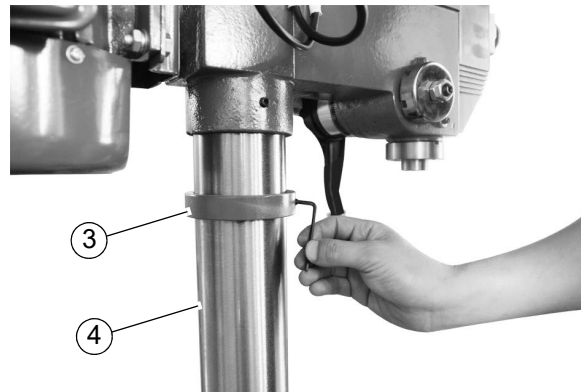
Img.3-3:

→ Mount the drill table support and the toothed rack on the column and make sure that the toothed rack is on the right-hand side of the column (when looking at the product from the front).



Img.3-4:

- Slide the toothed rack (1) all the way down until it locates into the lower column support (2).
Slide the toothed rack collar (3), tapered side facing down, over the column (4) until it locates the rack. Tighten the grub screw on upper collar.



Img.3-5:

- Fix table adjustment handle on the support.



Img. 3-6:

- Assemble table onto table support, tighten in place with table lock.



Img. 3-7:

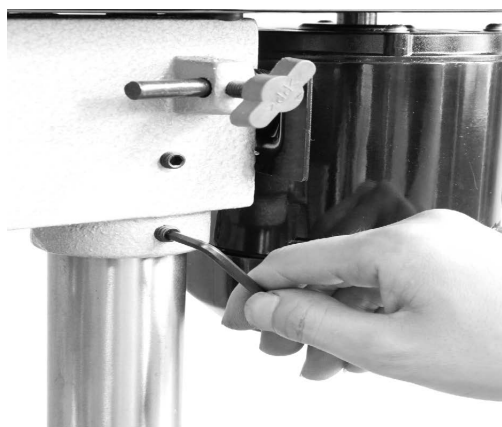
Main housing

- Lift the main housing and slide it down onto the column as far as it will go. Before securing the housing, ensure the spindle aligns with the table and base.



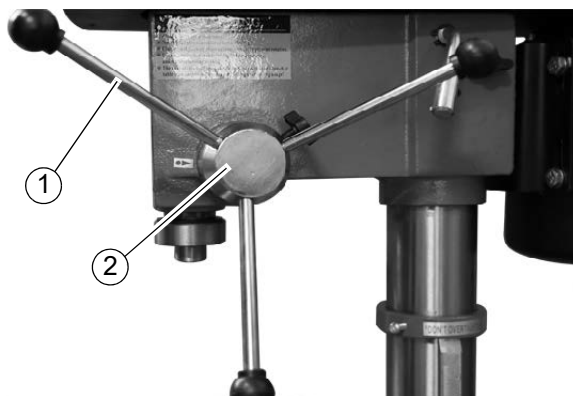
Img.3-8:

- To secure in position tighten the grub screws on the left and right hand sides of the housing.



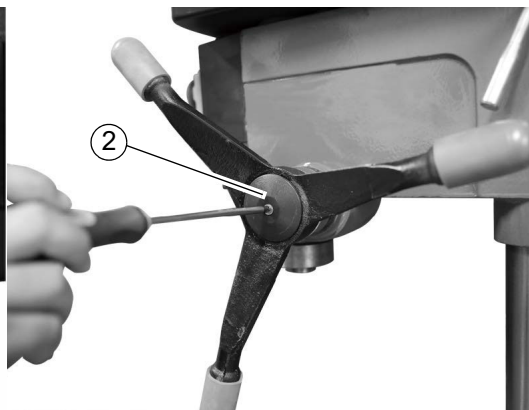
Img.3-9:

- To fit the feed wheel handles (1), screw them into feed wheel hub (2).



Img.3-10:

- For some cast iron feed handle, tighten the 3 grub screws to wheel hub (1). Then fix the plastic case (2) on cast iron feed handle.



Img.3-11:

Drill chuck & Arbor

- Before any assembly, ensure the chuck jaws are wound all the way up (inside the chuck) to prevent them from damage.



Img.3-12:

- Tighten Philip's head screws of the chuck guard to quill shaft.



Img.3-13:

Fit the tapered arbor end into the chuck by hand, using reasonable force.



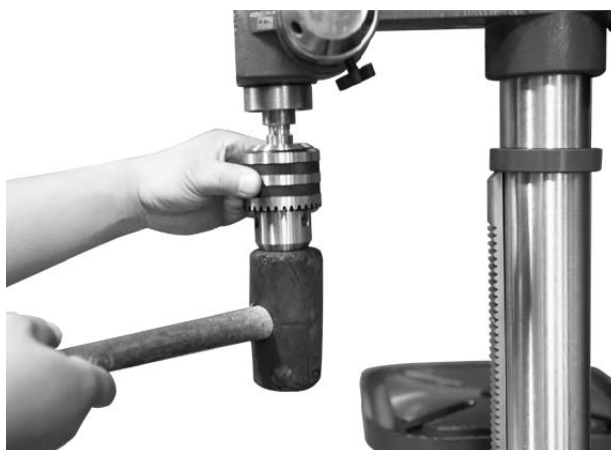
Img.3-14:

→ The arbor can then be inserted into the quill, twisting the arbor as you insert, aligning the tang into the slot. It should fit in with little resistance.



Img.3-15:

→ Once it is located a firm tap on the underside of the chuck with a soft hammer is required to secure it. The chuck & arbor are installed correctly if they cannot be pulled out with hand force.



Img.3-16:

3.5.2 Settings and Adjustments

WARNING!

During settings and adjustments ensure the drill press is disconnected from the power supply.

Table height adjustment

→ Loosen the table support lock.



Img. 3-17:

→ Rotate the table adjustment handle to set the desired table height and tighten the table rock to secure the table in position.



Img. 3-18:

Table tilt angle adjustment

- The table tilt angle is adjusted by loosening the screw located under the table support with a spanner.



Img.3-19:

- When the worktable has been tilted to the correct position, retighten the bolt to secure the position.



Img.3-20:

CAUTION!

When the table is angled/tilted, ensure the workpiece is clamped to the table.



3.5.3 Installing straight shank drill bits



- Using the chuck key, loosen the jaws of the chuck by rotating in an anti-clockwise direction.
- Insert the drill bit into the chuck.



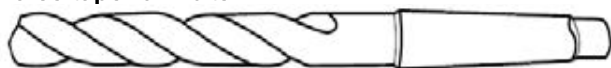
Img.3-21:

- Whilst holding the drill bit in one hand rotate the top collar of the chuck in a clockwise direction. Insert the chuck key into 1 of the 3 rotating holes and tighten until drill bit is secure.



Img.3-22:

Morse taper drill bits



- To use Morse taper bits, remove chuck and arbor. Turn arbor until the tang aligns with the slot in the quill.



Img.3-23:

- Insert the drift key into the slot and tap firmly with a metal hammer until it releases. (Ensure the chuck jaws are wound all the way up to prevent damage).



Img.3-24:

- Insert the tapered bit into the spindle hole, twist and push upwards until the tapered bit is seated.
- Place a block of wood on the table and raise the table until the tapered bit is firmly seated in the spindle.



Img.3-25:

3.5.4 Pre-setting the drilling depth

Bench type

To set the drilling depth, adjust the depth stop as follows:

With the motor switched off, lower the chuck until the drill bit touches the workpiece surface and hold it in this position.

Spin down the adjuster nut so that the gap between its underside and top of bracket is the depth of the hole required. Screw down the lock nut and lock it against the adjuster nut.



Img. 3-26:

The drill is now set to drill holes to your pre-determined depth from that particular start point. i.e. Providing the surface of your workpiece is flat and level, you may drill a series of holes, each to the same depth. The scale and pointer can be used when drilling individual holes. Lower the chuck until the drill bit touches the work, set the pointer against a point on the scale, and proceed to drill to the required depth, using the scale.

Floor type

To stop spindle (and bit) at a desired depth:

- Loosen depth stop lock knob (1) by turning in an anti-clockwise direction.
- Rotate depth scale (2) to the desired depth, then tighten half wing bolt.



Img.3-27:

To hold the spindle (and bit) at a desired depth:

- Loosen depth stop lock knob, turn feed wheel handle to lowest point.
- Rotate depth scale to desired depth and re-tighten depth stop lock knob. This keeps the component at the desired depth.



Img.3-28:

3.5.5 Changing the speed

Bench type

Before changing the speeds, ensure the machine is switched OFF, and disconnected from the power supply.



- Open the pulley cover.
- Slacken off the belt tension locking knob, to relieve any tension on the drive belt.
- Use the table on the inside of the pulley cover to position the V-belt in the correct place for the required spindle speed.



Img.3-29:

- When the belt is correctly positioned, tighten it by levering the motor away from the head. Lever the motor, with its bracket, away from the head, so that tension is applied to the belt. Tension is correct when the belt deflects by approx. 12mm at its centre, when using reasonable thumb pressure. Lock the motor in this position using the locking knob.

Floor type

The speed of the drill press can be changed by adjusting the belt on the pulley system. See chart inside pulley cover for speed configurations.

- Release the belt tension locking knobs located on either side of the main housing.



Img.3-30:

- Once the tension is released, the belt tension handle can be used to move the motor pulley closer to the idler pulley.



Img. 3-31:

- The belt is removed by lifting it over the lip of the pulley while rotating the pulley simultaneously.



Img. 3-32:

- After re-adjusting the belts, use the belt tension handle to move the motor pulley further away from the idler pulley. When the desired position is achieved use the locking knobs to secure the pulleys in place.



Img. 3-33:

- Proper belt tension is achieved when the measured deflection (by pushing in the centre of the belt) is approx. 5mm.



Img.3-34:

4 Operation

- Avoiding misuse on page 4

4.1 Switching the machine on

INFORMATION

As long as the drill chuck guard on the DQ20 is not closed, the drill press DQ20 cannot be started.

On the bench drill DQ13 and DQ16 there is no switch in the drill chuck guard.

As long as the pulley cover is not closed, the drill press cannot be started.

- Determine and adjust the position of the V-belt. Close the cover of the V-belt cover again with the screw plug.
- Set the height of drill chuck guard and close the drill chuck guard.



4.2 Switching the machine off

CAUTION!

Only press the emergency-stop button in a genuine emergency. You should not use the emergency stop button to stop the machine during normal operation.

- Actuate the push button "OFF".
- Pull the plug for a longer-term standstill.



4.3 Spindle quill feed

CAUTION!

Risk of impact by the spindle sleeve lever upon completion of the drilling feed. The return spring biases and discharges the stored energy.

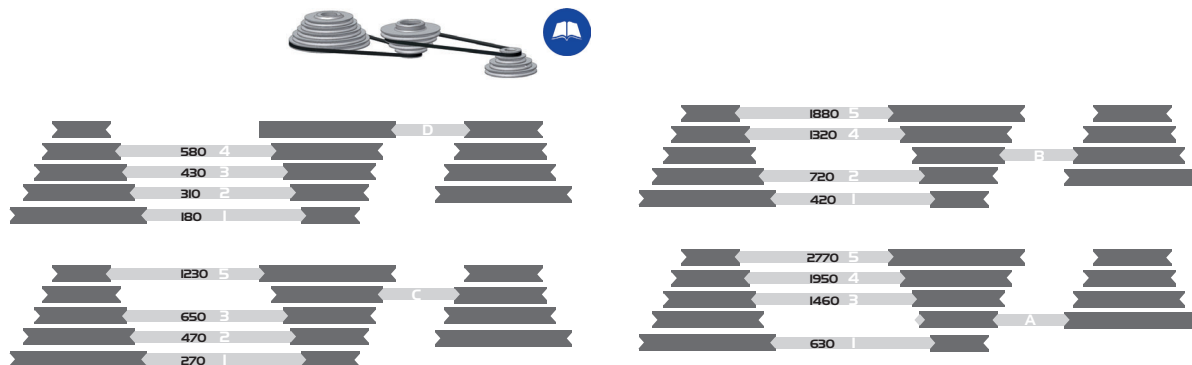
- Move the sleeve downward by means of the spindle sleeve lever. The sleeve is returned to its initial position by means of the spring force.



4.4 Speed setting on DQ20

Example:

To obtain a speed of 580 rpm, the front V-belt must be placed at position 4 and the rear V-belt at position D.



Img.4-1: 50Hz sticker in the protective cover of the V-belts

4.5 Cooling

The friction generated during rotation can cause the edge of the tool to become very hot.

The tool should be cooled during the drilling process. Cooling the tool with a suitable cooling lubricant ensures better working results and a longer edge life of the tools. For example, use a spray gun like the ones used for spraying flowers and fill it with a cooling lubricant.

INFORMATION

Use a water-soluble and non-pollutant emulsion as a cooling agent. This can be acquired from authorised distributors.

Make sure that the cooling agent is being collected.

Respect the environment when disposing of lubricants and coolants.

Follow the manufacturer's disposal instructions.



5 Maintenance

In this chapter you will find important information about

- ☐ Inspection,
- ☐ Maintenance and
- ☐ Repair.

ATTENTION!

Properly performed regular maintenance is an essential prerequisite for

- ☐ operational safety,
- ☐ failure-free operation,
- ☐ long service life of the machine and
- ☐ the quality of the products which you manufacture.

Installations and equipment from other manufacturers must also be in good order and condition.



5.1 Safety

WARNING!

The consequences of incorrect maintenance and repair work may include:

- ❑ very serious injury to personnel working on the machine,
- ❑ damage to the machine.

Only qualified personnel should carry out maintenance and repair work on the machine.



5.1.1 Preparation

WARNING!

Only work on the machine if it has been disconnected from the power supply.

Attach a warning sign which secures against unauthorized switching on.



5.1.2 Restarting

Before restarting, run a safety check.

- Safety check on page 8

WARNING!

Before starting the machine you must be sure that

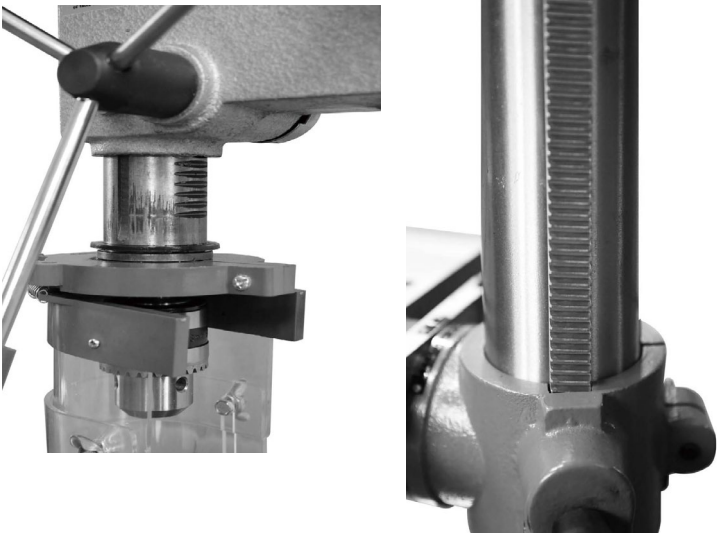
- ❑ no dangers generated for persons,
- ❑ the machine is not damaged.



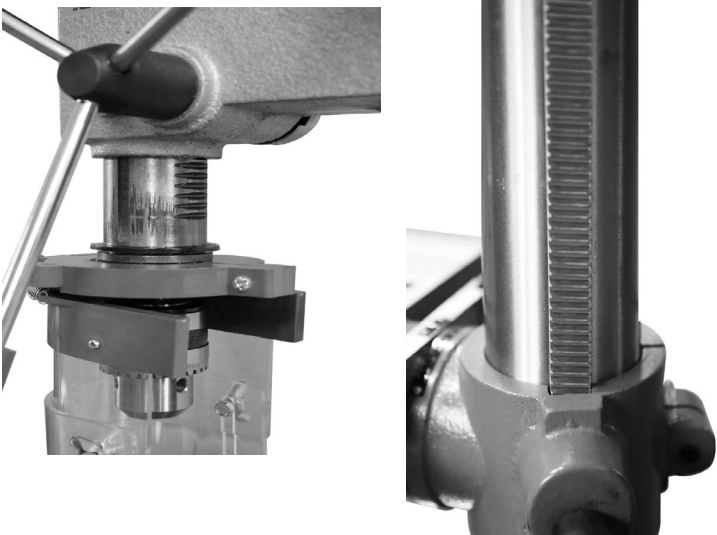
5.2 Inspection and maintenance

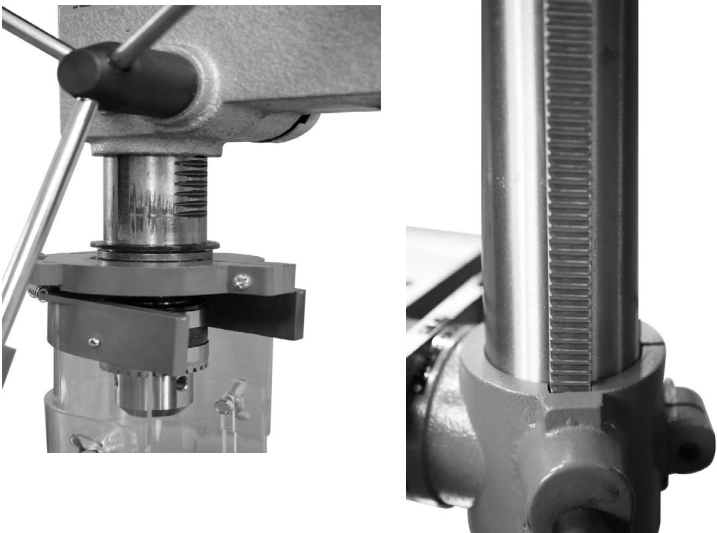
The type and level of wear depends to a large extent on the individual usage and operating conditions. Any indicated intervals therefore are only valid for the corresponding approved conditions.

Interval	Where?	What?	How?
Start of shift After each maintenance or repair work	Drilling machine	Examination for outside damages. ► Safety check on page 8 If the mains lead is damaged in any way, it should be replaced immediately.	
weekly	Clamping bolts	Loosening	→ Check if the clamping screws for the V-belt tension on the left and right side of the drilling head are well fastened. → Check if the V-belts are well tightened. Checking the tension of V-belts.

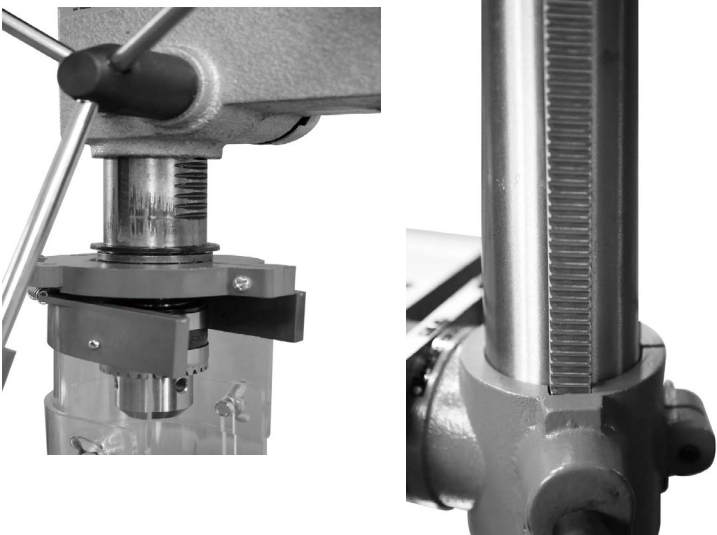
Interval	Where?	What?	How?
Occasionally	Drilling column with toothed rod and quill shaft	Oiling	→ Occasionally, lubricate the quill shaft assembly and rack with oil if required. Apply a thin coat of wax paste or oil to the table and column, for lubrication, and to help prevent corrosion. 
Every 6 months	V-belts at the drill head	Visual inspection	→ Check whether the V-belts have become porous and worn.

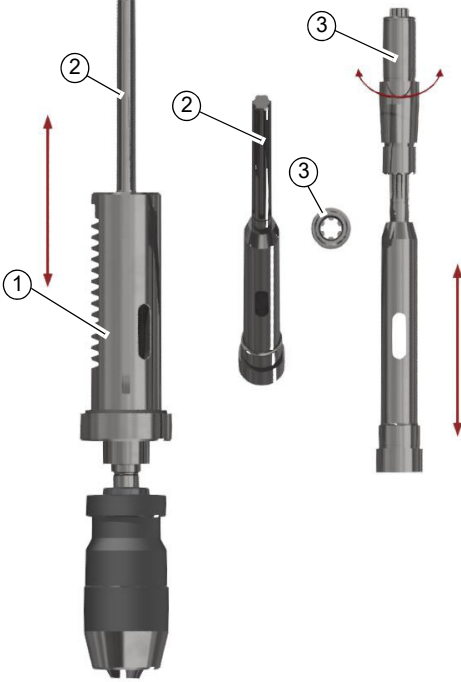
DQ13_DQ16_DQ20_GB.fm

Interval	Where?	What?	How?
Occasionally	Drilling column with toothed rod and quill shaft	Oiling	→ Occasionally, lubricate the quill shaft assembly and rack with oil if required. Apply a thin coat of wax paste or oil to the table and column, for lubrication, and to help prevent corrosion. 
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Interval	Where?	What?	How?
Occasionally	Drilling column with toothed rod and quill shaft	Oiling	→ Occasionally, lubricate the quill shaft assembly and rack with oil if required. Apply a thin coat of wax paste or oil to the table and column, for lubrication, and to help prevent corrosion. 
Every 6 months	V-belts at the drill head	Visual inspection	→ Check whether the V-belts have become porous and worn.

DQ13_DQ16_DQ20_GB.fm

Interval	Where?	What?	How?
Occasionally	Drilling column with toothed rod and quill shaft	Oiling	→ Occasionally, lubricate the quill shaft assembly and rack with oil if required. Apply a thin coat of wax paste or oil to the table and column, for lubrication, and to help prevent corrosion. 
Every 6 months	V-belts at the drill head	Visual inspection	→ Check whether the V-belts have become porous and worn.

Interval	Where?	What?	How?
in case of need	Toothing of the spindle	Lubrication	Any unusual rattling noises can be eliminated by regreasing. The sleeve (1) moves downwards or upwards with the toothed spindle (2) in the fixed driven sleeve (3) during drill feed. The noises are caused by the necessary clearance between the two toothings of the sleeve and spindle. The grease in the delivery condition may have been used up.  Img. 5-1: Regreasing is carried out from above via the spindle drive. Apply grease at the visible toothed area of the spindle. It is recommended to use a grease which can remain permanently inside the toothing. The grease "Staburag NBU 30 PTM" from Klüber is recommended and has proved to be a successful assembly grease for clearance fits.
according to operator's historic values, at least every 6 months	Electronics	Electrical inspection	► Electronics on page 10

INFORMATION

The spindle bearings are lifetime-lubricated. It is not necessary to lubricate it again.



DQ13_DQ16_DQ20_GB.fm

5.3 Repair

5.3.1 Customer service technician

For any repair work request the assistance of an authorised customer service technician. Contact your specialist dealer if you do not have customer service's information or contact Stürmer Maschinen GmbH in Germany who can provide you with a specialist dealer's contact information. Optionally, the

Stürmer Maschinen GmbH

Dr.-Robert-Pfleger-Str. 26

D- 96103 Hallstadt

can provide a customer service technician, however, the request for a customer service technician can only be made via your specialist dealer. If repairs are carried out by qualified technical personnel, they must follow the indications given in these operating instructions.

Stürmer Maschinen GmbH accepts no liability nor does it guarantee against damage and operating malfunctions resulting from failure to observe these operating instructions.

For repairs, only use

- faultless and suitable tools,
- original parts or parts from series expressly authorised by Stürmer Maschinen GmbH.

6 Malfunctions

Malfunction	Cause/ possible effects	Solution
Noise during work under load.	• Incorrect belt tension • Dry spindle (toothed spindle) • Tool blunt or incorrectly clamped. • Spindle bearing defective • Pulley on the motor has come loose.	• Adjust tension • Remove spindle and quill assembly and lubricate. • Use new tool and check tension (fixed setting of the bit, drill chuck and taper mandrel) • Have permanently lubricated spindle bearings replaced by qualified personnel. • Check the fastening of the pulley, tighten the fastening nut.
Bit „burnt“	• Incorrect speed • Chips are not coming out of the drilled hole. • Blunt drill bit. • Operating without cooling agent.	• Choose a different speed, excessive feed. • Retract the drill bit from the bore hole more often. • Sharpen the drill bit or insert new drill bit. • Use coolant.
Drill point runs off, drilled hole is not circular.	• Hard material or length of the cutting spirals/or angles on the tool are unequal • Drill bit is bent.	• Use a new drill bit.
Drill is running non-round or shaking	• Drill bit is bent. • Drill is not correctly clamped. • Drill chuck defective	• Replace drill bit • Clamp the drill bit properly. • Replace the drill bit chuck.

DQ13_DQ16_DQ20_GB.fm

Malfunction	Cause/ possible effects	Solution
The drill chuck or the Morse taper MT2 / B16 cannot be inserted or does not hold in the taper by itself.	Dirt, grease or oil on the taper inside of the drill chuck or on the taper surface of the drill spindle	- Clean surfaces well. - Keep surfaces free from grease.
Motor does not start.	- On DQ20, drill chuck protection not closed - Protective cover V-belt not closed	- Close drill chuck guard at DQ20 - Close protective cover of V-belt
Motor runs only if the push button "On" is pressed permanently.	Relay restart protection defective.	Have On / Off switch replaced by qualified personnel.
Motor overheated and no power	- Motor overloaded ? - Too low mains voltage - Motor incorrectly connected (DQ20 400V three-phase current)	Switch off immediately and have it checked by qualified personnel
Precision of the work deficient	- Heavy and unbalanced or deformed work-piece. - Inexact horizontal position of the work-piece holder.	- Balance the piece statically and secure without straining - Adjust workpiece-holder
Drilling spindle sleeve does not return to its initial position	Spindle return spring	Determine the cause and replace the spindle return spring if necessary.

7 Appendix

7.1 Copyright

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Subject to technical changes without notice.

7.2 Terminology/Glossary

Term	Explanation
Drill drift	Tool to release the bit or the drill chuck from the drill spindle
Drill chuck	Drill bit adapter
Drill head	Upper part of the drilling machine
Drill sleeve	Fixed hollow shaft which runs in the drill spindle.
Drilling spindle	Shaft activated by the motor
Drilling table	Supporting surface, clamping surface
Taper mandrel	Cone of the drill or of the drill chuck
Spindle sleeve lever	Manual operation for the drill feed
Quick-action drill chuck	Drill holding fixture to be clamped manually.
Workpiece	Part to be drilled, part to be machined.
Tool	Drill bit, countersink, etc.

7.3 Liability claims/warranty

Besides the legal liability claims for defects of the customer towards the seller, the manufacturer of the product, Stürmer Maschinen GmbH, Dr. Robert-Pfleger-Straße 26, D-96103 Hallstadt, does not grant any further warranties unless they are listed below or were promised as part of a single contractual provision.

- Liability or warranty claims are processed at Stürmer Maschinen GmbH's discretion either directly or through one of its dealers.
Any defective products or components of such products will either be repaired or replaced by components which are free from defects. Ownership of replaced products or components is transferred to Stürmer Maschinen GmbH.
- The automatically generated original proof of purchase which shows the date of purchase, the type of machine and the serial number, if applicable, is the precondition in order to assert liability or warranty claims. If the original proof of purchase is not presented, we are not able to perform any services.
- Defects resulting from the following circumstances are excluded from liability and warranty claims:
 - Using the product beyond the technical options and proper use, in particular due to overstraining of the machine.
 - Any defects arising by one's own fault due to faulty operations or if the operating manual

is disregarded.

- Inattentive or incorrect handling and use of improper equipment
- Unauthorized modifications and repairs
- Insufficient installation and safeguarding of the machine
- Disregarding the installation requirements and conditions of use
- atmospheric discharges, overvoltage and lightning strokes as well as chemical influences
- The following items are also not subject to liability or warranty claims:
 - Wearing parts and components which are subject to normal and intended wear, such as V-belts, ball bearings, lighting, filters, seals, etc.
 - Non reproducible software errors
- Any services, which Stürmer Maschinen GmbH or one of its agents performs in order to fulfil any additional warranty are neither an acceptance of the defects nor an acceptance of its obligation to compensate. Such services neither delay nor interrupt the warranty period.
- The court of jurisdiction for businessmen is Bamberg.
- If any of the aforementioned agreements is totally or partially inoperative and/or invalid, a provision which nearest approaches the intent of the guarantor and remains within the framework of the limits of liability and warranty which are specified by this contract is deemed agreed.

7.4 Storage

ATTENTION!

Incorrect and improper storage might result in damage or destruction of electrical and mechanical machine components.

Store packed and unpacked parts only under the intended environmental conditions.

Follow the instructions and information on the transport box.



- Fragile goods (Goods require careful handling)
- Protect against moisture and humid environment
- Prescribed position of the packing case (Marking of the top surface - arrows pointing to the top)
- Maximum stacking height
Example: not stackable - do not stack further packing case on top of the first one.



Consult Stürmer Maschinen GmbH if the machine and accessories are stored for more than three months or are stored under different environmental conditions than those specified here.

7.5 Advice for disposal / Options of reuse:

Please dispose of your equipment in an environmentally friendly manner, by not placing waste in the environment but in a professional manner.

Please do not simply throw away the packaging and later the disused machine, but dispose of both in accordance with the guidelines laid down by your city council/local authority or by an authorised disposal company.

7.5.1 Decommissioning

CAUTION!

Used devices need to be decommissioned in a professional way in order to avoid later misuses and endangerment of the environment or persons.



- Unplug the power cord.
- Cut the connection cable.
- Remove all operating materials from the used device which are harmful to the environment.
- If applicable remove batteries and accumulators.
- Disassemble the machine if required into easy-to-handle and reusable assemblies and component parts.
- Dispose of machine components and operating fluids using the intended disposal methods.

7.5.2 Disposal of new device packaging

All used packaging materials and packaging aids from the machine are recyclable and generally need to be supplied to the material reuse.

The packaging wood can be supplied to the disposal or the reuse.

Any packaging components made of cardboard box can be chopped up and supplied to the waste paper collection.

The films are made of polyethylene (PE) and the cushion parts are made of polystyrene (PS). These materials can be reused after reconditioning if they are passed to a collection station or to the appropriate waste management enterprise.

Only forward the packaging materials correctly sorted to allow direct reuse.

7.5.3 Disposal of the old device

INFORMATION

Please take care in your interest and in the interest of the environment that all component parts of the machine are only disposed of in the intended and admitted way.



Please note that the electrical devices comprise a variety of reusable materials as well as environmentally hazardous components. Please ensure that these components are disposed of separately and professionally. If in doubt, consult your municipal waste disposal company. If appropriate, call on the help of a specialist waste disposal company for the treatment of the material.

7.5.4 Disposal of electrical and electronic components

Please make sure that the electrical components are disposed of professionally and according to the statutory provisions.

The machine contains electrical and electronic components and must not be disposed of as household waste. According to the European Directive regarding electrical and electronic used devices and the implementation of national legislation, used power tools and electrical machines need to be collected separately and supplied to an environmentally friendly recycling centre.

As the machine operator, you should obtain information regarding the authorised collection or disposal system which applies for your company.

Please make sure that the electrical components are disposed of professionally and according to the legal regulations. Please only throw depleted batteries in the collection boxes in shops or at municipal waste management companies.

7.6 Disposal via municipal collection facilities

Disposal of used electrical and electronic components

(Applicable in the countries of the European Union and other European countries with a separate collecting system for those devices).



The sign on the product or on its packing indicates that the product must not be handled as common household waste, but that it needs to be disposed of at a central collection point for recycling. Your contribution to the correct disposal of this product will protect the environment and the public health. Incorrect disposal constitutes a risk to the environment and public health. Material recycling will help reduce the consumption of raw materials. For further information about the recycling of this product, please consult your District Office, municipal waste collection station or the shop where you have purchased the product.

7.7 Product follow-up

We are required to perform a follow-up service for our products which extends beyond shipment.

We would be grateful if you could send us the following information:

- ☐ Modified settings
- ☐ Any experiences with the geared drill which might be important for other users
- ☐ Recurring malfunctions

Stürmer Maschinen GmbH

Dr.-Robert-Pfleger-Str. 26

D-96103 Hallstadt

email: info@stuermer-maschinen.de

8 Ersatzteile - Spare parts

8.1 Ersatzteilbestellung - Ordering spare parts

Bitte geben Sie folgendes an - *Please indicate the following :*

- ☐ Seriennummer - *Serial No.*
- ☐ Maschinenbezeichnung - *Machines name*
- ☐ Herstellungsdatum - *Date of manufacture*
- ☐ Artikelnummer - *Article no.*

Die Artikelnummer befindet sich in der Ersatzteilliste. *The article no. is located in the spare parts list.* Die Seriennummer befindet sich am Typschild. *The serial no. is on the rating plate.*

8.2 Hotline Ersatzteile - Spare parts Hotline



+49 (0) 951-96555 -118

ersatzteile@stuermer-maschinen.de



8.3 Service Hotline



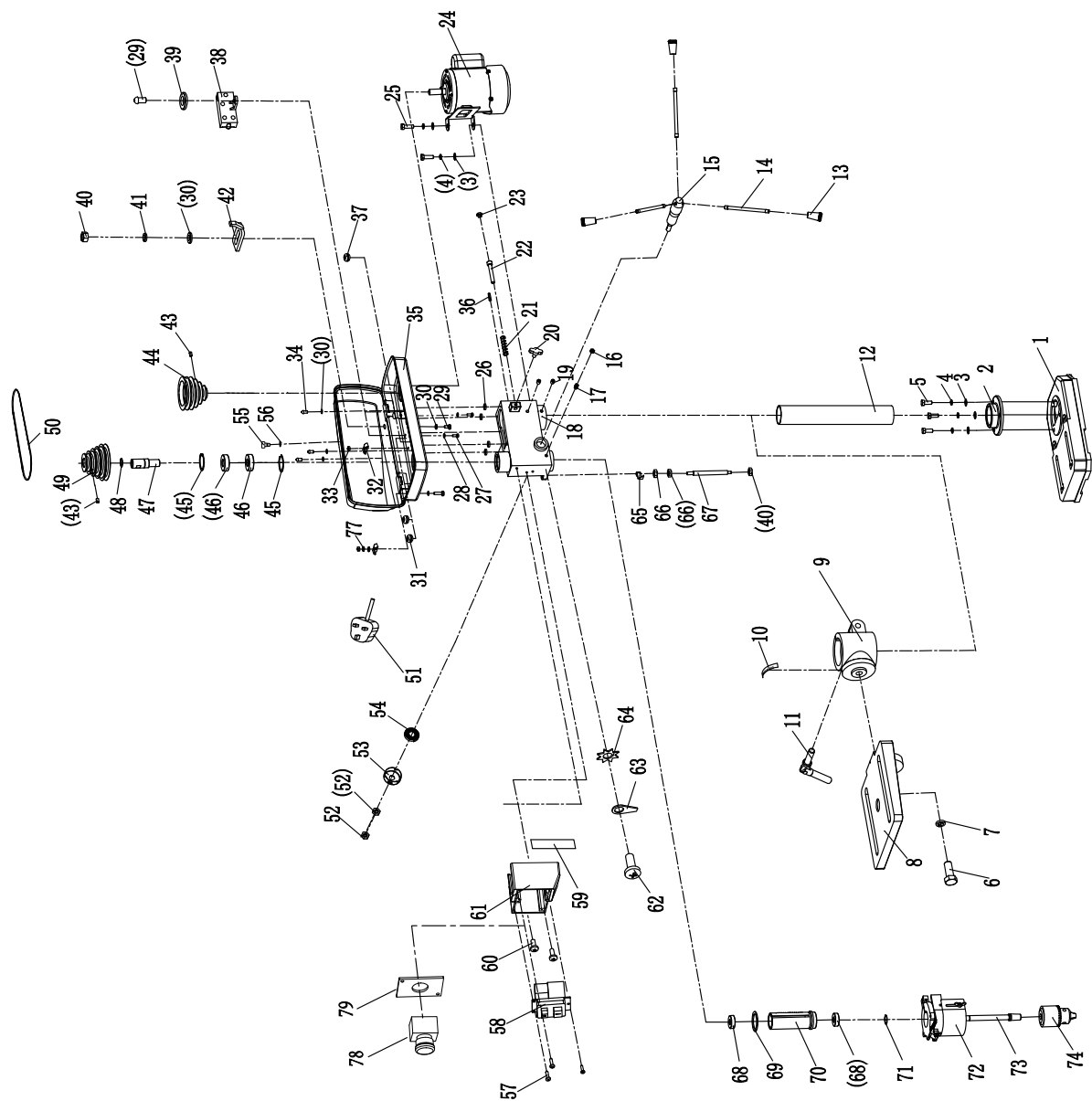
+49 (0) 951-96555 -100

service@stuermer-maschinen.de



8.4 Ersatzteilzeichnungen - Spare part drawings

8.4.1 DQ13



DQ13 - Ersatzteilliste - Spare part list					
Pos.	Bezeichnung	Description	Menge Qty.	Grösse Size	Artikelnummer Item no.
1	Grundkörper	Base	1		0318200001
2	Säulenflansch	Column Flange	1		0318200002
3	Flache Scheibe	Flat Washer	5	8	
4	Federscheibe	Spring Washer	5	8	
5	Sechskantschraube	Hexagon bolt	3	M8 x 20	
6	Sechskantschraube	Hexagon bolt	1	M12 x 30	
7	Federscheibe	Spring Washer	1	12	
8	Arbeitstisch	Working Table	1		0318200008
9	Tabelle Unterstützung	Table Support	1		0318200009
10	Winkel-Etikett	Angle Label	1		0318200010
11	Klemmgriff	Locking Handle	1		0318200011

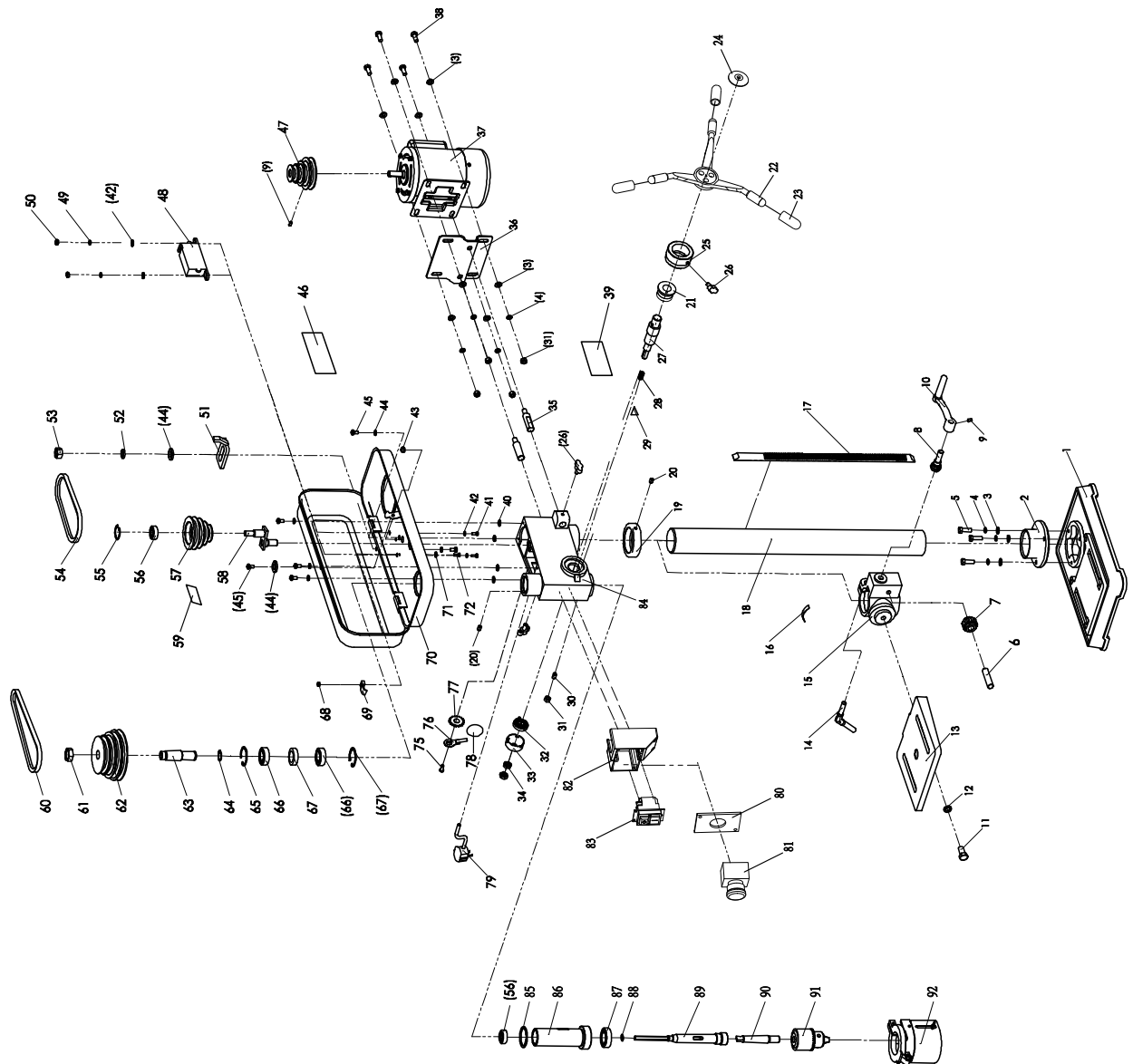
DQ13_DQ16_DQ20_parts.fm

DQ13 - Ersatzteilliste - Spare part list

Pos.	Bezeichnung	Description	Menge Qty.	Grösse Size	Artikelnummer Item no.
12	Säule	Column	1		0318200012
13	Handgriff Spitze	Handle Tip	3		0318200013
14	Griff	Handle	3		0318200014
15	Zahnradwelle	Gear Shaft	1		0318200015
16	Mutter	Nut	3	M8	
17	Innensechskantschraube	Hexagon socket screw	1	M8 x12	
18	Gehäuse	Housing	1		0318200018
19	Innensechskantschraube	Hexagon socket screw	2	M8 x 8	
20	Flügelknopf	Wing Knob	1		0318200020
21	Motor Feder	Motor Spring	1		0318200021
22	Motor Schubstange	Motor push rod	1		0318200022
23	Unterlegscheibe	Washer	1		0318200023
24	Motor	Motor	1		0318200024
25	Sechskantschraube	Hexagon bolt	2	M8 x 25	
26	Dämpfungsscheibe	Damping Washer	4		0318200026
27	Kreuzschlitzschraube mit Linsenkopf	Cross Recessed Pan Head Screw	3	M5 x16	
28	Flache Scheibe	Flat Washer	3	5	
29	Kreuzschlitzschraube mit Linsenkopf	Cross Recessed Pan Head Screw	1	M6 x 16	
30	Flache Scheibe	Flat Washer	6	6	
31	Schutzring	Protector Ring	2	22	0318200031
32	Kabelklemme	Cord Clamp	3		
33	Mutter	Nut	3	M5	
34	Kreuzschlitzschraube mit Linsenkopf	Cross Recessed Pan Head Screw	4	M6 x 10	
35	Riemenscheibenabdeckung Baugruppe	Pulley Cover Assembly	1		0318200035
36	Spannstift	Roll Pin	1	6 x18	0318200036
37	Schutzring	Protector Ring	1	9	0318200037
38	Mikroschalter	Micro Switch	1		0318200038
39	Flache Scheibe	Flat Washer	1	6	
40	Mutter	Nut	1	M6	
41	Federscheibe	Spring Washer	1	6	
42	Mikroschalter Drückerklaue	Micro Switch Pressing Claw	1		0318200042
43	Innensechskantschraube	Hexagon socket screw	2	M6x10	
44	Riemenscheibe Motor	Motor Pulley	1		0318200044
45	Sicherungsring für Bohrung	Circlip For Hole	2	40	0318200045
46	Lager	Bearing	2	6203	0406203ZZ
47	Keilnut Spindel	Keyway Spindle	1		0318200047
48	Sicherungsring für Lager	Circlip For Bearing	1	22	0318200048
49	Keilriemenscheibe Spindel	Spindle Pulley	1		0318200049
50	Keilriemen	Belt	1	K-630	0318200050
51	Stecker mit Kabel	Plug With Cable	1		0318200051
52	Mutter	Nut	2	M10	
53	Federdeckel	Spring Cover	1		0318200053
54	Feder	Spring	1		0318200054
55	Schraube	Screw	1		0318200055
56	Sicherungsring für Lager	Circlip For Bearing	1	6	0318200056
57	Kreuzschlitz-Blechschaube	Cross Recess Head Tapping Screw	3	ST 2.9 x12	
58	Schalter	Switch	1		0318200058
59	Kalibrierungsetikett	Calibration Label	1		0318200059
60	Kreuzschlitzschraube mit Linsenkopf	Cross Recessed Pan Head Screw	2	M4x10	0318200060
61	Schaltkasten	Switch Box	1		0318200061
62	Kreuzschlitzschraube mit Linsenkopf	Cross Recessed Pan Head Screw	2	M4x6	0318200062
63	Geerdete Teile	Grounded Parts	2		
64	Federscheibe	Tooth Lock Washer	2		0318200064
65	Anzeige	Indicator	1		0318200065
66	Mutter	Nut	2	M10x1	0318200066
67	Begrenzungsschraube	Limited Bolt	1		0318200067
68	Lager	Bearing	2	6201	0406201ZZ
69	Unterlegscheibe	Washer	1		0318200069
70	Spindel Buchse	Spindle Socket	1		0318200070
71	Sicherungsring für Lager	Circlip For Bearing	1	12	0318200071
72	Futterschutz	Chuck Guard	1		0318200072
73	Hauptspindel	Main Spindle	1		0318200073
74	Bohrutter	Drill chuck	1		0318200074
77	Federscheibe	Spring Washer	3	5	
78	Not-Halt-Schalter	Emergency Switch	1		0318200078
79	Schalterabdeckung	Switch Panel	1		0318200079

DQ13_DQ16_DQ20_parts.fm

8.4.2 DQ16



DQ16 - Ersatzteilliste - Spare part list

Pos.	Bezeichnung	Description	Menge Qty.	Grösse Size	Artikelnummer Item no.
1	Grundkörper	Base	1		0318201001
2	Säulenflansch	Column Flange	1		0318201002
3	Flache Scheibe	Flat Washer	7	8	
4	Federscheibe	Spring Washer	11	8	
5	Sechskantschraube	Hexagon bolt	3	M8 x 25	
6	Schneckenstift	Worm Pin	1		0318201006
7	Schneckenrad	Worm Gear	1		0318201007
8	Schnecke	Worm	1		0318201008
9	Innensechskantschraube	Hexagon socket screw	2	M6 x 10	
10	Kurbel	Crank	1		0318201010
11	Sechskantschraube	Hexagon bolt	1	M12 x 25	
12	Federscheibe	Spring Washer	1	12	0318201012
13	Arbeitstisch	Working Table	1		0318201013
14	Griffknopf	Handle Knob	1		0318201014
15	Tabelle Unterstützung	Table Support	1		0318201015
16	Winkel-Etikett	Angle Label	1		0318201016
17	Zahnstange	Rack	1		0318201017

DQ13_DQ16_DQ20_parts.fm

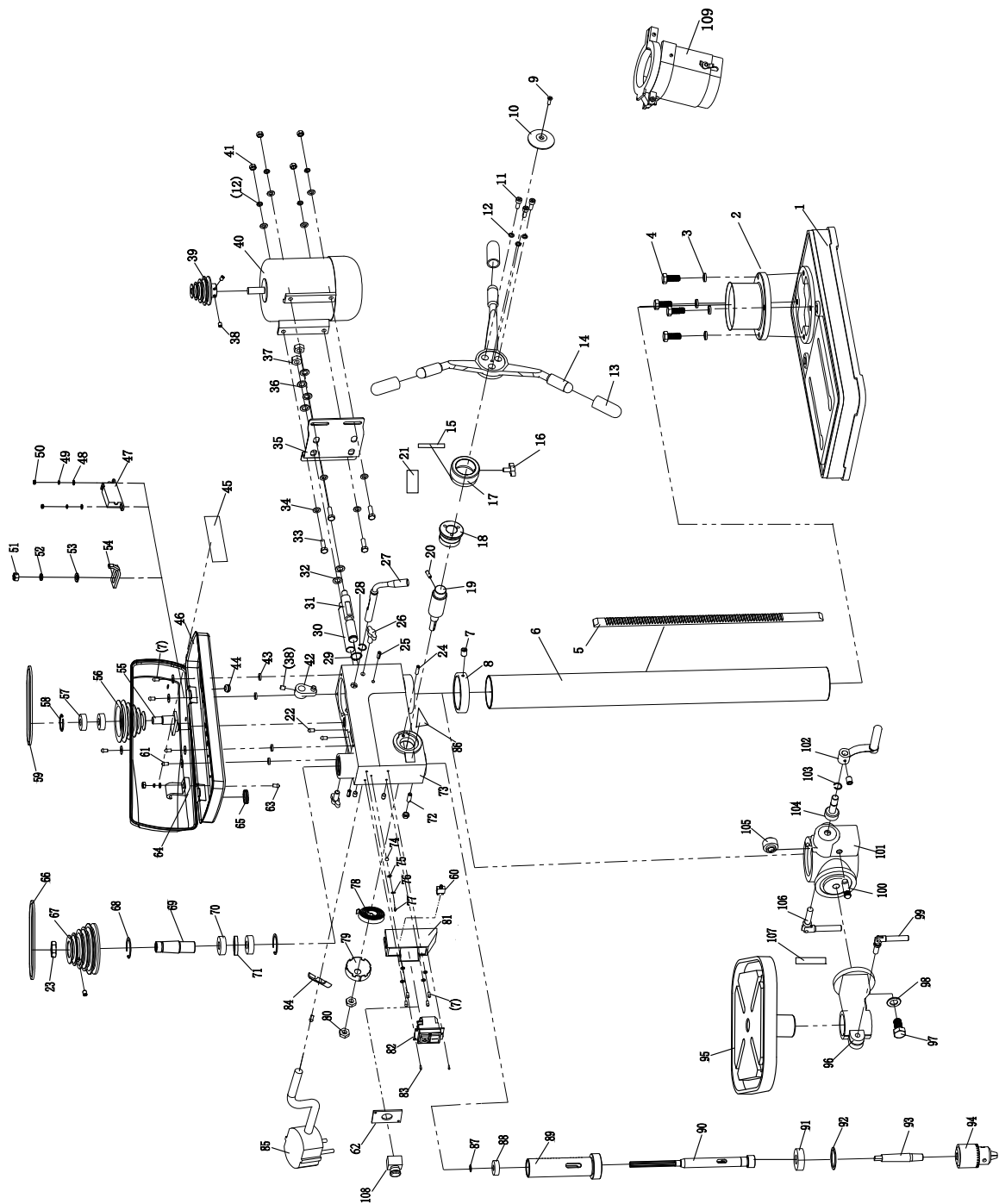
DQ16 - Ersatzteilliste - Spare part list

Pos.	Bezeichnung	Description	Menge Qty.	Grösse Size	Artikelnummer Item no.
18	Säule	Column	1		0318201018
19	Kragengestell	Collar Rack	1		0318201019
20	Innensechskantschraube	Hexagon socket screw	3	M8 x10	
21	Verbindungsring	Connecting ring	1		0318201021
22	Griff	Handle	3		0318201022
23	Handgriff Spitze	Handle Tip	3		0318201023
24	Griff Sitz	Handle Seat	1		0318201024
25	Zifferblattskala	Dial Scale	1		0318201025
26	Griffknopf	Handle Knob	3		0318201026
27	Zahnradwelle	Gear Shaft	1		0318201027
28	Gewindestift mit Schlitz	Thread Pin With Slot	1	M6 x 20	
29	Anzeige	Indicator	1		0318201029
30	Innensechskantschraube	Hexagon socket screw	1		0318201030
31	Mutter	Nut	5	M8	
32	Feder	Spring	1		0318201032
33	Federdeckel	Spring Cover	1		0318201033
34	Mutter	Nut	2	M12	
35	Motor Schubstange	Motor push rod	2		0318201035
36	Motorbefestigungsplatte	Motor Connection Plate	1		0318201036
37	Motor	Motor	1		0318201037
38	Sechskantschraube	Outside Hex Bolt	4	M8 x 20	
39	Warnhinweis	Warning Label	1		0318201039
40	Dämpfungsscheibe	Damping Washer	4		0318201040
41	Kreuzschlitz Pan Hd Schraube	Cross Recess Pan Hd Screw	2	M5 x16	
42	Flache Scheibe	Flat Washer	4	5	0318201042
43	Schutzring	Protector Ring	1		0318201043
44	Flache Scheibe	Flat Washer	7	6	0318201044
45	Kreuzschlitz Pan Hd Schraube	Cross Recess Pan Hd Screw	6	M6 x12	
46	Geschwindigkeitsetikett	Speed Label	1		0318201046
47	Riemenscheibe Motor	Motor Pulley	1		0318201047
48	Mikroschalter	Microswitch	1		0318201048
49	Federscheibe	Spring Washer	2	5	
50	Mutter	Nut	2	M5	
51	Mikroschalter Druckkralle	Microswitch pressure claw	1		0318201051
52	Federscheibe	Spring Washer	1	6	
53	Mutter	Nut	1	M6	
54	Keilriemen	Belt	1	O-480	0318201054
55	Sicherungsring für Bohrung	Circlip For Hole	1	32	0318201055
56	Lager	Bearing	2	6201	0406201ZZ
57	Mittlere Umlenkrolle	Middle Pulley	1		0318201057
58	Exzenterwelle	Eccentric Shaft	1		0318201058
59	Warnhinweis	Warning Label	1		0318201059
60	Keilriemen	Belt	1	O-500	0318201060
61	Mutter	Nut	1	M20	0318201061
62	Keilriemenscheibe Spindel	Spindle Pulley	1		0318201062
63	Keilnut Spindel	Keyway Spindle	1		0318201063
64	Sicherungsring für Lager	Circlip For Bearing	1	20	0318201064
65	Sicherungsring für Bohrung	Circlip For Hole	2	42	0318201065
66	Lager	Bearing	2	6004	0406004ZZ
67	Unterlegscheibe	Washer	1		0318201067
68	Mutter	Nut	1	M4	
69	Kabelklemme	Cord Clamp	1		0318201069
70	Riemenscheibenabdeckung	Pulley Cover	1		0318201070
71	Flache Scheibe	Flat Washer	1	4	0318201071
72	Kreuzschlitzschraube mit Linsenkopf	Cross Recessed Pan Head Screw	1	M4 x16	
75	Kreuzschlitzschraube mit Linsenkopf	Cross Recessed Pan Head Screw	2	M4 x10	
76	Federscheibe	Tooth Lock Washer	2		0318201076
77	Geerdete Teile	Grounded Parts	2		0318201077
78	Etikett für geerdete Teile	Grounded Parts Label	1		
79	Stecker mit Kabel	Plug With Cable	1		
80	Schalterabdeckung	Switch Panel	1		0318201080
81	Not-Halt-Schalter	Emergency Switch	1		0318201081
82	Schaltergehäuse	Switch Box	1		0318201082
83	Schalter	Switch	1		0318201083
84	Gehäuse	Housing	1		0318201084
85	Unterlegscheibe	Washer	1		0318201085
86	Spindel Buchse	Spindle Socket	1		0406005ZZ
87	Lager	Bearing	1	6005	0318201087
88	Sicherungsring für Lager	Circlip For Bearing	1	12	0318201088
89	Hauptspindel	Main Spindle	1		0318201089
90	Kegelspindel	Taper Spindle	1		0318201090

DQ13_DQ16_DQ20_parts.fm

DQ16 - Ersatzteilliste - Spare part list					
Pos.	Bezeichnung	Description	Menge Qty.	Grösse Size	Artikelnummer Item no.
91	Futter	Chuck	1		0318201091
92	Futterschutz	Chuck Guard	1	4	0318201092

8.4.3 DQ20



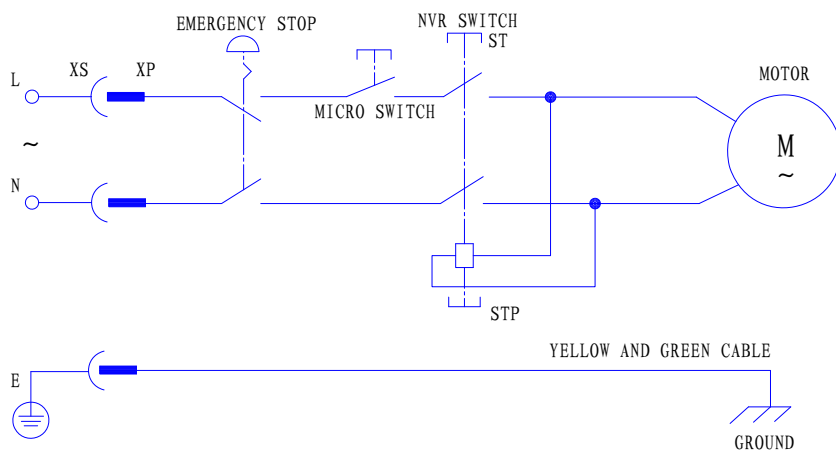
DQ13_DQ16_DQ20_parts.fm

DQ20 - Ersatzteilliste - Spare part list					
Pos.	Bezeichnung	Description	Menge Qty.	Grösse Size	Artikelnummer Item no.
1	Grundkörper	Base	1		0318202001
2	Säulenflansch	Column Flange	1		0318202002
3	Federscheibe	Spring Washer	4	10	
4	Sechskantschraube	Hexagon bolt	4	M10x25	
5	Zahnstange	Rack	1		0318202005
6	Säule	Column	1		0318202006
7	Innensechskantschraube	Hexagon socket screw	2	M6x10	
8	Kragengestell	Collar Rack	1		0318202008
9	Senkkopfschraube mit Kreuzschlitz	Cross Recess Countersunk Hd Screw	1	M6x16	
10	Kappengriff	Cap Handle	1		0318202010
11	Soc Hd Cap Schraube	Hex. Soc Hd Cap Screw	3	M8x20	
12	Federscheibe	Spring Washer	3	8	
13	Handgriff Scheide	Handle Sheath	3		0318202013
14	Griff	Handle	1		0318202014
15	Kalibrierungsetikett	Calibration Label	1		0318202015
16	Flügelknopf	Wing Knob	1	M8x18	0318202016
17	Zifferblattska	Dial Scale	1		0318202017
18	Verbindung Schleife	Connection Loop	1		0318202018
19	Zahnradwelle	Gear Shaft	1		0318202019
20	Spannstift	Roll Pin	1	5x16	0318202020
21	Warnhinweis	Warning Label	1		0318202021
22	Kreuzschlitzschraube mit Linsenkopf	Cross Recessed Pan Head Screw	3	M5x10	
23	Mutter	Nut	1	M24 x1.5	0318202023
24	Spannstift	Roll Pin	1	Ø 5 x 25	0318202024
25	Spannstift	Roll Pin	2	6 x18	0318202025
26	Buchse Klemmgriff	Locking Handle Knob	2	M10 x 25	0318202026
27	Griff Gurtspannung	Handle Belt Tension	1		0318202027
28	Sicherungsring für Lager	Circlip For Bearing	1	15	0318202028
29	Sicherungsring für Lager	Circlip For Bearing	1	19	0318202029
30	Rutschwelle	Slip Shaft	1		0318202030
31	Einstellwelle	Adjusting Shaft	1		0318202031
32	Flache Scheibe	Flat Washer	4	12	
33	Sechskantschraube	Hexagon bolt	4	M8 x 25	
34	Flache Scheibe	Flat Washer	8	8	
35	Motorbefestigungsplatte	Motor Connection Plate	1		0318202035
36	Federscheibe	Spring Washer	2	12	
37	Mutter	Nut	2	M12	
38	Innensechskantschraube	Hexagon socket screw	6	M8 x 10	
39	Riemenscheibe Motor	Motor Pulley	1		0318202039
40	Motor	Motor	1		0318202040
41	Mutter	Nut	6	M8	
42	Nockengruppe	Cam Assembly	1		0318202042
43	Dämpfungsscheibe	Damping Washer	4		0318202043
44	Schutzring	Protector Ring	2	Ø10	0318202044
45	Geschwindigkeitsetikett	Speed Label	1		0318202045
46	Riemenscheibenabdeckung	Pulley Cover	1		0318202046
47	Mikroschalter	Microswitch	1		0318202047
48	Flache Scheibe	Flat Washer	9	5	
49	Federscheibe	Spring Washer	9	5	
50	Mutter	Nut	10	M5	
51	Mutter	Nut	1	M6	
52	Federscheibe	Spring Washer	1	6	
53	Flache Scheibe	Flat Washer	9	6	
54	Mikroschalter Drückerklaue	Micro Switch Pressing Claw	1		0318202054
55	Exzenterwelle	Eccentric Shaft	1		0318202055
56	Mittlere Keilriemenscheibe	Middle Pulley	1		0318202056
57	Lager	Bearing	2	6202	0406202ZZ
58	Sicherungsring für Bohrung	Circlip For Hole	1	35	0318202058
59	Keilriemen	Belt	1	A-550	0318202059
60	Lichtschalter	Light Switch	1		0318202060
61	Kreuzschlitzschraube mit Linsenkopf	Cross Recessed Pan Head Screw	5	M6 x12	
62	Schalterabdeckung	Switch Panel	1		0318202062
63	Kreuzschlitzschraube mit Linsenkopf	Cross Recessed Pan Head Screw	10	M5x16	
64	Kabelklemme	Cord Clamp	5		
65	Schutzring	Protector Ring	1	Ø22	0318202065
66	Keilriemen	Belt	1	A-620	0318202066
67	Keilriemenscheibe Spindel	Spindle Pulley	1		0318202067
68	Sicherungsring für Bohrung	Circlip For Hole	2	40	0318202068

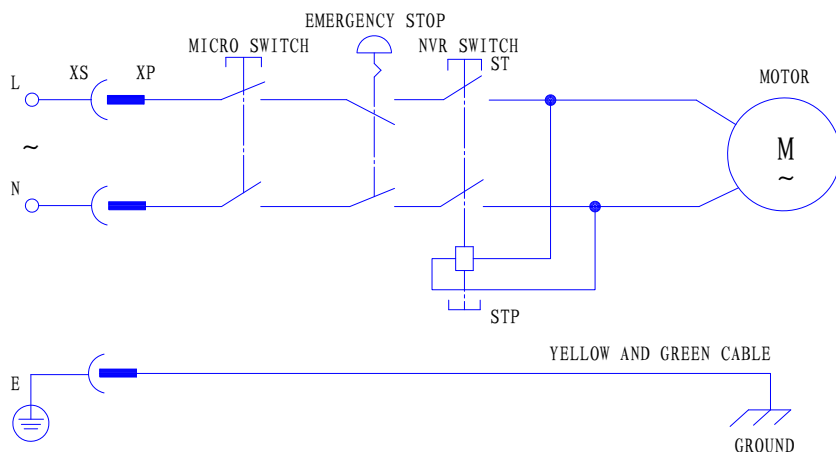
DQ13_DQ16_DQ20_parts.fm

DQ20 - Ersatzteilliste - Spare part list					
Pos.	Bezeichnung	Description	Menge Qty.	Grösse Size	Artikelnummer Item no.
69	Keilnut Spindel	Keyway Spindle	1		0318202069
70	Lager	Bearing	3	6005	0406005ZZ
71	Lagerring	Bearing Ring	1		0318202071
72	Innensechskantschraube	Hexagon socket screw	1	M8 x 25	
73	Gehäuse	Housing	1		0318202073
74	Label	Label	1		0318202074
75	Federscheibe	Tooth Lock Washer	1	5	
76	Geerdete Teile	Grounded Parts	1		
77	Senkkopfschraube	Cross Recess Head Screw	1	M5 x 6	
78	Feder	Spring	1		0318202078
79	Federdeckel	Spring Cover	1		0318202079
80	Dünne Mutter	Thin Nut	2	M12	0318202080
81	Schaltkasten	Switch Box	1		0318202081
82	Schalter	Switch	1		0318202082
83	Kreuzschlitz-Blechschaube	Cross Recess Head Tapping Screw	2	M3x10	
84	Kabelklemme	Cord Clamp	1		
85	Stecker mit Kabel	Plug With Cable	1	BS	
86	Anzeige	Indicator	1		0318202086
87	Sicherungsring für Lager	Circlip For Bearing	1	12	0318202087
88	Lager	Bearing	1	6203	0406203ZZ
89	Spindel Buchse	Spindle Socket	1		0318202089
90	Hauptspindel	Main Spindle	1		0318202090
91	Lager	Bearing	1	6006	0406006R
92	Unterlegscheibe	Washer	1	Ø47	0318202092
93	Kegelspindel	Taper Spindle	1		0318202093
94	Futter	Chuck	1		0318202094
95	Arbeitstisch	Working Table	1	290x290	0318202095
96	Tisch Arm	Table Arm	1		0318202096
97	Sechskantschraube	Hexagon bolt	1	M16 x 30	
98	Federscheibe	Spring Washer	1	16	
99	Klemmgriff	Locking Handle	1	M10 x 32	0318202099
100	Schneckenstift	Worm Pin	1		0318202100
101	Tabelle Unterstützung	Table Support	1		0318202101
102	Kurbel	Crank	1		0318202102
103	Sicherungsring für Lager	Circlip For Bearing	1	14	0318202103
104	Schnecke	Worm	1		0318202104
105	Schneckenrad	Worm Gear	1		0318202105
106	Klemmgriff	Locking Handle	1	M12 x 45	0318202106
107	Winkel-Etikett	Angle Label	1		0318202107
108	Not-Halt-Schalter	Emergency Switch	1		0318202108
109	Futterschutz	Chuck guard	1		0318202109

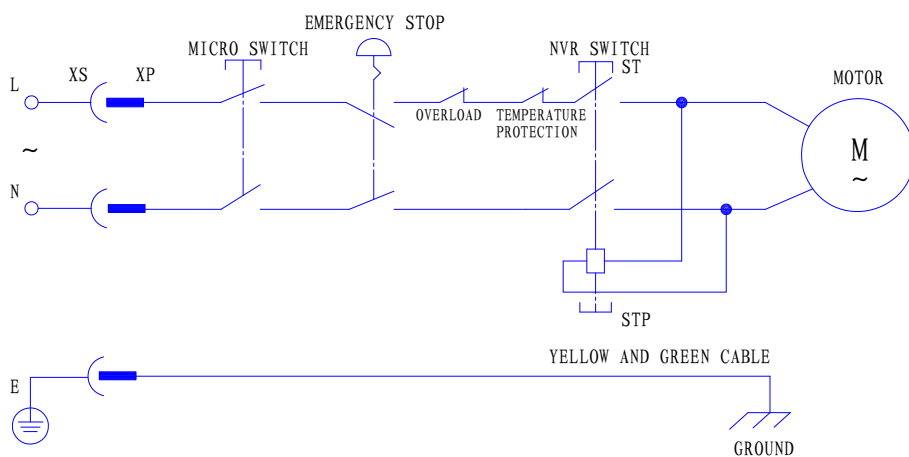
8.5 DQ13 230V - Schaltplan - Wiring diagram



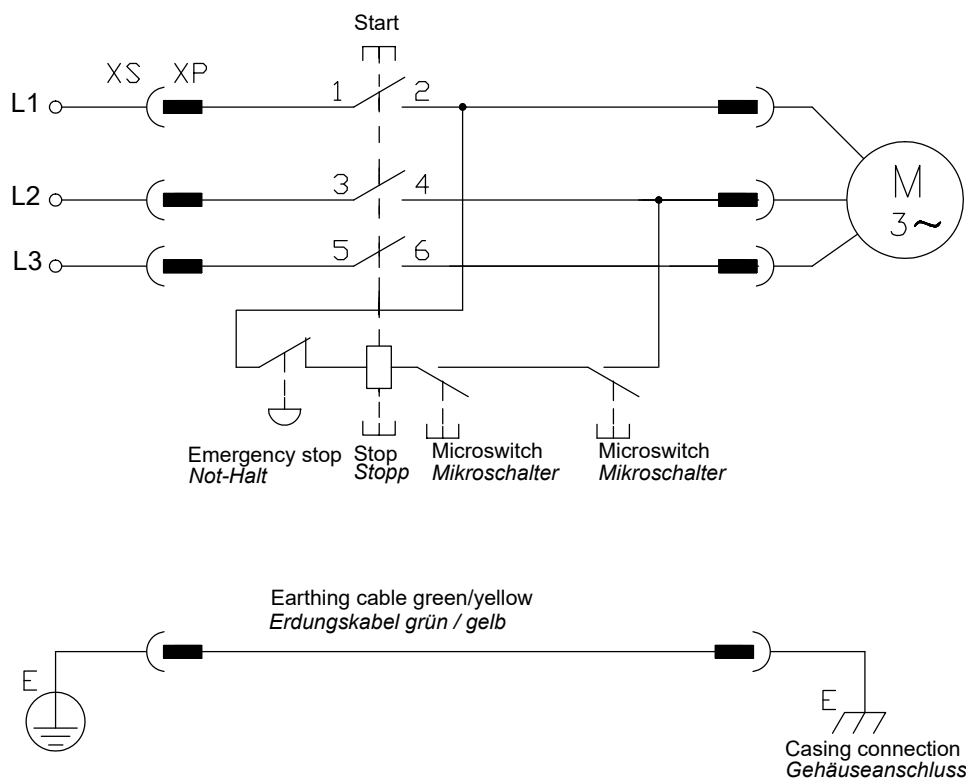
8.6 DQ16 230V - Schaltplan - Wiring diagram



8.7 DQ20 230V - Schaltplan - Wiring diagram



8.8 DQ20 400V - Schaltplan - Wiring diagram



EC Declaration of Conformity

according to Machinery Regulation 2023/1230 Annex V Part A

The manufacturer / distributor Stürmer Maschinen GmbH
Dr. Robert-Pfleger-Str. 26
D96103 Hallstadt

hereby declares that the following product

Product designation: Drill press

Type designation: DQ13 | DQ 16

fulfils all the relevant provisions of the Machinery Regulation specified above and the additionally applied directives (in the following) - including the changes which applied at the time of the declaration.

Description:

Hand-controlled drill press

The following additional EU directives have been applied:

EMC Directive 2014/30/EU ; Restriction of the use of certain hazardous substances in electrical and electronic equipment 2015/863/EU

The following harmonized standards were applied:

EN 62841-1:2015 Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety - Part 1: General requirements

EN 62841-3-13:2017: Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety - Part 3-13: Special requirements for portable drills

EN IEC 55014-1:2017/A11 2020 Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission

EN IEC 55014-2:2015 Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2: Immunity

EN 61000-3-2:2014 Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)

EN 61000-3-3:2013/A1 2019 Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection

EN ISO 12100:2011-03 Safety of machinery - General principles for design - Risk assessment and risk reduction

Name and address of the person authorized to compile the technical file:

Kilian Stürmer, phone: +49 (0) 951 96555 -150



Kilian Stürmer (CEO, General Manager)
Hallstadt, 2024-07-25

EC Declaration of Conformity

according to Machinery Regulation 2023/1230 Annex V Part A

The manufacturer / distributor Stürmer Maschinen GmbH
Dr. Robert-Pfleger-Str. 26
D96103 Hallstadt

hereby declares that the following product

Product designation: Drill press

Type designation: DQ 20

fulfils all the relevant provisions of the Machinery Regulation specified above and the additionally applied directives (in the following) - including the changes which applied at the time of the declaration.

Description:

Hand-controlled drill press

The following additional EU directives have been applied:

EMC Directive 2014/30/EU ; Restriction of the use of certain hazardous substances in electrical and electronic equipment 2015/863/EU

The following harmonized standards were applied:

EN 12717:2009-07 Safety of machine tools - Drilling machines

EN 60204-1:2018 Safety of machinery - Electrical equipment of machines - Part 1: General requirements

EN IEC 55014-1:2017 Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission

EN IEC 55014-2:2015 Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2: Immunity

EN 61000-3-2:2014 Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)

EN 61000-3-3:2013 Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection

EN ISO 12100:2011-03 Safety of machinery - General principles for design - Risk assessment and risk reduction

Name and address of the person authorized to compile the technical file:

Kilian Stürmer, phone: +49 (0) 951 96555 - 150



Kilian Stürmer (CEO, General Manager)
Hallstadt, 2024-07-25

